

ADDITIONAL NOTES ON THE *ERIOCAULACEAE*. XCI

Harold N. Moldenke

*PAEPALANTHUS ARMERIA* Mart.

Additional bibliography: Mold., *Phytologia* 54: 151. 1983.

Recent collectors encountered this plant in wet places, in both flower and fruit in September and describe the flowers as whitish and the "folhas acinzentadas".

Additional citations: BRAZIL: Distrito Federal: *Héringer, Figueiras, Mendonça, Pereira, Salles, & Silva* 5419(N).

*PAEPALANTHUS ASCENDENS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 30. 1976; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 237--238. 1928 (N, W) & pl. 158 (Ld, N).

*PAEPALANTHUS ASPER* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 30. 1976; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Additional citations: MOUNTED ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: pl. 176. 1928 (Ld)

*PAEPALANTHUS ATER* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 29: 297. 1974; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 247--249. 1928 (N, W) & pl. 165. 1928 (Ld, N).

*PAEPALANTHUS ATROVAGINATUS* Ruhl.

Additional bibliography: Mold., *Phytologia* 33: 30. 1976; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Additional citations: MOUNTED CLIPPINGS: Alv. Silv., *Fl. Serr. Min.* 45. 1908 (W).

*PAEPALANTHUS AUREUS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 30. 1976; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Additional citations: MOUNTED ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: pl. 180 & 181. 1928 (Ld, Ld, N, N).

*PAEPALANTHUS AUYANTEPUIENSIS* Mold.

Additional bibliography: Mold., *Phytologia* 33: 30. 1976; Mold., *Pjuyol. Mem.* 2: 117, 610, & 627. 1980; Mold., *Phytologia* 50: 245 & 246. 1982.

Recent collectors describe this plant as having elongate, brown, procumbent to ascending stems, to 40 cm. long, and shiny, deep grass-green or glossy dark-green, reflexed leaves, yellowish-green

peduncles, and grayish-white white-hairy heads. They have found it growing in wet ground below rocks and in *Bonnettia roraimae* forests, at 1940--2500 m. altitude, in both flower and fruit in February and October. Material has been misidentified and distributed in some herbaria as *P. fraternus* N. E. Br.

Additional citations: VENEZUELA: Amazonas: *Steyermark, Brewer-Carías, & Liesner 124418* (N). Bolívar: *Steyermark, Espinosa, McDiarmid, & Brewer-Carías 116105* (Ld). GUYANA: *Persaud 130* (N).

*PAEPALANTHUS BABYLONIENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 37: 33. 1977; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 188--189. 1928 (N, W) & pl. 121 (Ld, N, W).

*PAEPALANTHUS BAHIENSIS* (Bong.) Kunth

Additional synonymy: *Paepalanthus bahiensis* (Bong.) Ruhl, in herb.

Additional & emended bibliography: Bong., *Mem. Acad. Imp. Sci. St.-Petersb.*, ser. 6, 1: 622--623 (1831) and 2 (3): [545]--547, pl. 20. 1835; Mold., *Phytologia* 37: 33. 1977; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Citations: MOUNTED CLIPPINGS: Bong., *Ess. Monog. Erioc.* 183. 1831 (N, W); Kunth, *Enum. Pl.* 3: 572. 1841 (N, W).

*PAEPALANTHUS BALANSAE* Ruhl.

Additional bibliography: Mold., *Phytologia* 37: 33. 1977; Angely, *S. Amer. Bot. Bibl.* 2: 675. 1980; Mold., *Phytol. Mem.* 2: 150, 178, & 610. 1980.

Recent collectors have encountered this plant in periodically flooded areas, in cerrado, and in bosque abierto, in both flower and fruit in June and September.

Additional citations: PARAGUAY: *Casas & Molero FC.3865* (N), *FC.4006* (N); *Krapovickas & Schinini 32553* (Ld).

*PAEPALANTHUS BALANSAE* var. *DENSIFLORUS* Mold.

Additional bibliography: Mold., *Phytologia* 25: 151. 1973; Angely, *S. Amer. Bot. Bibl.* 2: 675. 1980; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

*PAEPALANTHUS BARAUNENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 30--31. 1976; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Additional citations: BRAZIL: Minas Gerais: *W. R. Anderson 8939* (W--2755484). MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 112--113. 1928 (N, W) & pl. 70 (Ld, W).

*PAEPALANTHUS BARBIGER* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 41: 475. 1979; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

*PAEPALANTHUS BARBULATUS* Herzog

Synonymy: *Paepalanthus bargulatus* Herzog. ex Mold., *Phytolo-*

gia 52: 128 in syn. 1982.

Additional bibliography: Mold., *Phytologia* 37: 33. 1977; Mold., *Phytol. Mem.* 2: 150 & 610. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74. 1980; Mold., *Phytologia* 52: 128. 1982.

Recent collectors describe this plant as a rosette herb, to 20 cm. tall, the leaves coriaceous, green above, gray-green beneath. They have found it growing in a region of "sandstone rock outcrops with small areas of disturbed marsh as base and nearby river with lush vegetation along the rocky margins, in restinga and natural campo, and in dry places on campos, at 25--1200 m. altitude, in both flower and fruit in March, June, and August.

Additional citations: BRAZIL: Bahia: *Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19906* (Ld, N, W--2936344); *Mori, Carvalho, Mattos Silca, Santos, & Ribeiro 11930* (Ld, N); *Mori, Walther, & Necker 12784* (Ld). Minas Gerais: *Smith, Segadas-Vianna, Egler, Dau, Silva, Ormond, & Machline in L. B. Smith 6836a* (W--2120203).

*PAEPALANTHUS BARKLEYI* Mold.

Additional bibliography: Mold., *Phytologia* 25: 152. 1973; Mold., *Phytol. Mem.* 2: 109, 117, & 610. 1980.

Recent collectors describe this plant as growing in tufts, the leaves a rich grass-green, and have found it growing in woods and pantano, at 2600--2880 m. altitude, in both flower and fruit in January and October.

Additional citations: COLOMBIA: Antioquia: *F. W. Barkley 18A147* (W--1999317). VENEZUELA: Mérida: *Cuatrecasas, Ruiz-Teran, & Lopez-Figueiras 28150* (W--2585779A). Táchira: *Steyermark, Dunsterville, & Dunsterville 101060* (N).

*PAEPALANTHUS BARREIRENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 37: 33. 1977; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl.* 1: 260--261 (N, W) & pl. 172 [bis]. 1928 (Ld, N, W).

*PAEPALANTHUS BATATALENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 26: 136. 1973; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 77--79 (N, W) & pl. 45. 1928 (Ld, N, W).

*PAEPALANTHUS BATOCEPHALUS* Ruhl.

Additional bibliography: Mold., *Phytologia* 35: 20. 1976; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

*PAEPALANTHUS BELIZENSIS* Mold.

Additional bibliography: Mold., *Phytologia* 41: 475. 1979; Mold., *Phytol. Mem.* 2: 74 & 610. 1980.

*PAEPALANTHUS BELLUS* Mold.

Additional bibliography: Mold., *Phytologia* 25: 152. 1973; *Angely, S. Amer. Bot. Bibl.* 2: 675. 1980; Mold., *Phytol. Mem.* 2:

150 & 610. 1980.

Hatschbach encountered this plant in wet places on campo, in flower and fruit in October.

Additional citations: BRAZIL: Paraná: *Hatschbach 43246* (Ld, W--2931953).

*PAEPALANTHUS BENEDICTI* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 26: 136. 1973; Mold., *Phytol. Mem.* 2: 150 & 610. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: ]28--240. 1928 (N, W) & pl. 159. 1928 (Ld, N, W).

*PAEPALANTHUS BIFIDUS* (Schrad.) Kunth

Additional synonymy: *Paepacantus bifidus* (Schara) Kunth ex Mold., *Phytol. Mem.* 2: 424 in syn. 1980.

Additional & emended bibliography: Bong., *Mem. Acad. Imp. Sci. St.-Petersb.*, ser. 6, 1: 624 & 637. 1831; Arekal & Ramaswamy, *Proc. 63rd Ind. Cong.* 3 (6): 85. 1976; Thanikaimoni, *Trav. Sect. Scient. Techn. Inst. Franç. Pond.* 13: 332. 1976; Mold., *Phytologia* 41: 475--476 (1979) and 42: 36. 1979; Mold., *Phytol. Mem.* 2: 96, 109, 117, 122, 124, 126, 134, 150, 401, 424, & 610. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74. 1980; Hocking, *Excerpt. Bot. A.* 36: 23. 1981; Reis & Lipp, *New Pl. Sources Drugs* 22. 1982; Mold., *Phytologia* 50: 245 (1982) and 53: 348. 1983.

Recent collectors have encountered this plant "in white sand in full sun of secondary forest and weedy regrowth at margin of oil-palm plantation", at 60 m. altitude,, in flower and fruit in June. Carvalho & Gatti describe the leaves as concolorous and the "erva crescendo na areia". Reis & Lipp (1982) cite *A. Silva 210* and record the name "capim mortinha".

Other recent collectors describe the plant as an herb. 8--15 cm. tall, the leaves light-green, the involucre bractlets stramineous, and the flowers white. They have found it growing in open areas of peaty marshes, the wetter areas predominantly sedge, grass, and other monocots on white sand and peat, with small shrubs, with scattered rocky bluffs with scrub and small trees, on sandy campina and on "campina de areia branca", in swamps among dunes, as a "common herb on white sand savannas", and "along brushy roadsides and in clearings with many species of *Solanum*, including *S. rugosum*, *S. asperum*, and *S. subinerne*". They have found it at altitudes up to 1000 m., in flower and fruit in February, May, and July.

The *Prance & Lleras 23719*, previously cited and distributed as typical *P. bifidus*, is now the type collection of its f. *parvicapitulatus* Mold.

Additional citations: GUYANA: *De la Cruz 1700* (Ba), 1750 (Ba), 1849 (Ba--384517); *Jenman 5287* (Ld); *Maas & Westra 3489* (Ld, N). SURINAM: *Nee & Mori 4202* (Ws). FRENCH GUIANA: *Granville B.5325* (Ld). BRAZIL: *Amapa: Murça Pires & Cavalcante 52143* (W--2514662). Amazonas: *Lasseign 21169* in part (W--2780463).

Bahia: *Carvalho & Gatti 833* (Ld); *Hage, Mattos Silva, & Ribeiro 270* (Ld); *Harley, Mayo, Storr, Santos, & Pinheiro in Harley 18781* (Ld, N, W--2936337). Espiritu Santo: *Sucré 8315* (W--2940690). Minas Gerais: *Hatschbach 41294* (N). Pará: *Cid, Ramos, Mota, & Rosas 1872* [Herb. Inst. Nac. Pesq. Amaz. 96040] (Ld, N); *Davidson & Martinelli CD.10276* (Ld); *Martinelli 6948* [RB Herb. 203541] (Ld); *Plowman, Rosa, & Rosario 9559* (Ld, N, W--2967825); *Prance 21155* in part (N); *Silva & Santos 4684* (N, N).

*PAEPALANTHUS BIFIDUS* f. *BREVIPIPES* Mold.

Additional bibliography: Mold., *Phytologia* 41: 476. 1979; Mold., *Phytol. Mem.* 2: 117, 122, 124, 151, & 610. 1980; Mold. in *Harley & Mayo, Toward Checklist Fl. Bahia 74*. 1980; Mold., *Phytologia* 50: 245. 1982.

Recent collectors describe this plant as a small, slender, tufted herb, to 10 cm. tall, the leaves rather bright-green or mid-green, the heads "off-white" or pale whitish-brown. They have encountered it in sandy soil at the base of hills, in "open scrub on white sand with damp areas and extensive sedge meadows (brejo)", in mixed restinga, mainly high restinga on drier ground with areas of normally wet sedge meadow", and in sandy soil of disturbed woods, from sealevel to 950 m. altitude, flowering and fruiting in January, February, April, and September.

The *Prance, Ramos, Farias, & Philcox 4835*, distributed as and previously cited by me as this form, is now regarded as representing f. *parvicapitulatus* Mold.

Additional citations: VENEZUELA: Amazonas: *Steyermark, Maas, Field, & Redmond 123644* (Lc). FRENCH GUIANA: *Raynal-Roques AR. 20208* (Cy). BRAZIL: Bahia: *Harley, Mayo, Storr, Santos, & Pinheiro in Harley 18049* (Ld, N), *18845* (N); *Mattos Silva & Hage 604* (Ld); *Mori, Mattos Silva, & Santos 10469* (N). Minas Gerais: *Hatschbach 41294* (W--2840084). Pará: *Prance 21155* in part (W--2935278).

*PAEPALANTHUS BIFIDUS* f. *FRUSTUS* Mold.

Additional bibliography: Mold., *Phytologia* 37: 34. 1977; Mold., *Phytol. Mem.* 2: 151, 403, 404, 425, & 610. 1980.

*PAEPALANTHUS BIFIDUS* f. *PARVICAPITULATUS* Mold., *Phytologia* 43: 355. 1979.

Bibliography: Mold., *Phytologia* 43: 355. 1979; Mold., *Phytol. Mem.* 2: 151 & 610. 1980; Hocking, *Excerpt. Bot. A.36*: 23. 1981.

The collections cited below were previously cited by me as typical *P. bifidus* (Schrad.) Kunth and/or its f. *brevipes* Mold. before the present taxon was recognized.

Citations: BRAZIL: Amazonas: *Prance & Lleras 23719* (Ld--type, Ld--isotype, N--isotype, W--2838244--isotype); *Prance, Ramos, Farias, & Philcox 4835* (Ld, N, S, W--257308A).

*PAEPALANTHUS BIFRONS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 37: 34. 1977; Mold., *Phytol. Mem.* 2: 151 & 610. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 206--207. 1928 (N, W) & pl. 136. 1928 (Ld, N, W).

*PAEPALANTHUS BIFRONS* var. *FUSCIOR* Alv. Silv.

Additional bibliography: Mold., Phytologia 25: 153. 1973; Mold., Phytol. Mem. 2: 151 & 610. 1980.

Citations: MOUNTED CLIPPINGS: Alv. Silv., Fl. Mont. 1: 207--208. 1928 (N, W).

*PAEPALANTHUS BLEPHAROPHORUS* (Bong.) Kunth

Additional bibliography: Mold., Phytologia 37: 34. 1977; Mold., Phytol. Mem. 2: 151 & 610. 1980.

*PAEPALANTHUS BOMBACINUS* Alv. Silv.

Additional bibliography: Mold., Phytologia 37: 34. 1977; Mold., Phytol. Mem. 2: 151 & 610. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 82--83. 1928 (N, W) & pl. 49. 1928 (Ld, N, W); Kunth, Enum. Pl. 3: 574. 1841 (W).

*PAEPALANTHUS BONGARDI* Kunth

Additional bibliography: Mold., Phytologia 41: 476. 1979; Mold., Phytol. Mem. 2: 151 & 610. 1980.

*PAEPALANTHUS BRACHYPHYLLUS* Ruhl.

Additional bibliography: Mold., Phytologia 37: 34. 1977; Mold., Phytol. Mem. 2: 151 & 610. 1980.

Poole describes this plant as an infrequent annual, to 20 cm. tall, with whitish flower-heads, and found in both in flower and fruit in June.

Additional citations: BRAZIL: Amazonas: *Poole 1794* (N).

*PAEPALANTHUS BRACHYPUS* (Bong.) Kunth

Additional bibliography: Mold., Phytologia 37: 34 (1977), 40: 26 (1978), and 41: 476. 1979; Hocking, Excerpt. Bot. A.33: 89. 1979; Mold., Phytol. Mem. 2: 151 & 610. 1980.

Additional citations: BRAZIL: Minas Gerais: *Maguire, Maguire, & Murça Pires 44773* (Ld, Ld, N). MOUNTED CLIPPINGS: Kunth, Enum. Pl. 3: 572. 1841 (W).

*PAEPALANTHUS BRACHYPUS* f. *BREVIPILOSUS* Mold.

Additional bibliography: Hocking, Excerpt. Bot. A.33: 89. 1979; Mold., Phytologia 41: 476. 1979; Mold., Phytol. Mem. 2: 151 & 610. 1980.

*PAEPALANTHUS BRADEI* Mold.

Additional bibliography: Mold., Phytologia 25: 154. 1973; Angely, S. Amer. Bot. Bibl. 2: 674. 1980; Mold., Phytol. Mem. 2: 151 & 610. 1980.

[to be continued]